



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

230 SOUTH DEARBORN ST.

CHICAGO, ILLINOIS 60604

APR 27 1990

REPLY TO THE ATTENTION OF:

5WD-TUB-9

Mr. Bernard P. Killian  
Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

RECEIVED

MAY 09 1990

Dear Mr. Killian:

On March 19-22, 1990, the mid-year evaluation of the Illinois Environmental Protection Agency's (IEPA) Underground Injection Control (UIC) program was conducted as a joint USEPA Region V and USEPA Headquarters-Office of Drinking Water (ODW) review. The purpose of the evaluation was to conduct the routine Regional mid-year review of progress made in the regulation of Class I, III, IV, and V wells during the first half of Fiscal Year (FY) 1990 and to conduct an assessment by the USEPA-ODW of national program comparability.

During FY 1990, the IEPA's UIC program has made progress, especially in the area of land ban petition reviews. Throughout the land ban petition review process, significant contributions have been made to the review of land ban petitions by the IEPA and its consultants, the Illinois State Geological and Water Surveys. In view of the extremely tight timeframes which must be met in reaching petition decisions within the specified ban dates, it is important that all Agencies involved in the land ban process continue their close coordination and active communication. In particular, Region V will make every effort to work closely with the IEPA to ensure that permit modifications that are necessary to support permit decisions can be issued in conjunction with USEPA's formal petition decisions.

Additionally, a potential exists for the IEPA to become involved in additional Class I permitting and land ban activities if any of the three Class I non-hazardous wells become reclassified as hazardous as a result of the newly promulgated Toxic Characteristic (TC) rules. The IEPA is expected to evaluate the impact these TC rules will have on the Class I non-hazardous wells and Class V wells.

Significant progress continues to be made in effectively enforcing against UIC violations when they are found and generally the IEPA resolves the cases of non-compliance within 90 days. However, we note the need for the IEPA to utilize the exceptions list when appropriate. Further, USEPA continues to encourage the IEPA to pursue obtaining administrative order authority, which would significantly strengthen IEPA's enforcement program.

During the mid-year evaluation, USEPA continued to raise the concern about the limited progress made in the implementation of a shallow injection well (Class V) program as negotiated for FY 1990. Numerous Class V activities are being pursued at the IEPA, however, this is being done in a fragmented manner due to the lack of focus on the shallow injection well area within the Division of Land Pollution Control (DLPC). As a result, no significant progress was made by the DLPC in expanding its role as the coordination point in the Agency for Class V activities. Noting that a Class V coordinator has now been identified, USEPA continues to stress the need for the coordinator to serve as the focal point for coordinating, tracking, and documenting shallow injection well activities within the State.

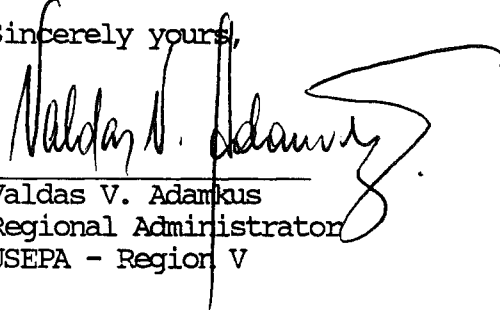
During the course of the review, USEPA representatives emphasized that the leading National priority for the UIC program over the next few years will be the establishment of a viable shallow injection well program. Regions and States are expected to pursue as a high priority activity the initiation of various approaches to the control of potentially endangering Class V wells through the use of existing regulations to the fullest extent possible. As a result, during the mid-year evaluation, discussions focused on further Class V activity in Illinois that the IEPA could consider for FY 1991 such as permitting, enforcement, and inspection of Class V wells. The IEPA is strongly encouraged to consider initiating permit call-ins for high-priority well types, similar to the approach the Region is currently pursuing. In addition, the closure and remediation of Class V wells which may be reclassified as hazardous as a result of the TC rules will be a top enforcement priority for the Class V program. Other suggestions for shallow injection well initiatives include better integration of the Class V program with the State's ground water program efforts such as linking the Class V effort to priority vulnerable ground water areas in the State or within wellhead protection areas.

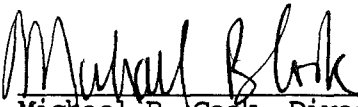
Consistent with the national trend, it is anticipated that most Class I land ban petition review activities will be completed in the near future and as a result, a decrease in Class I related workload is expected which would free up existing resources to support an increased Class V effort. Given the relatively mature status of regulating Class I wells in Illinois, we believe that Class V wells which serve as direct conduits of contamination into underground sources of drinking water constitute the highest UIC program priority in Illinois. Therefore, USEPA continues to emphasize the need for the IEPA to commit to developing a more pro-active shallow injection well program based on environmental priorities, consistent with FY 1991 National and Regional guidance. The Region will discuss the potential to shift resources to shallow injection wells during negotiations on the FY 1991 state specific guidance.

A copy of the mid-year evaluation report is enclosed. We look forward to continued progress in the UIC program during FY 1990, and urge your

increased attention to the shallow injection well effort. If you have any questions or comments, please feel free to contact Edward Watters, UIC Section Chief, at (312) 886-1502.

Sincerely yours,

  
Valdas V. Adamkus  
Regional Administrator  
USEPA - Region V

  
Michael B. Cook, Director  
Office of Drinking Water  
USEPA - Headquarters

Enclosure



EPA Region V/Headquarters  
Mid-Year Review of the  
Illinois  
Underground Injection Control Program  
FY 1990



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
UNDERGROUND INJECTION CONTROL PROGRAM  
FISCAL YEAR (FY) 1990  
MID-YEAR EVALUATION

EXECUTIVE SUMMARY

During the week of March 19-22, 1990, a mid-year evaluation was conducted at the Illinois Environmental Protection Agency (IEPA). Representatives of USEPA-Headquarters Office of Drinking Water and USEPA-Region V visited the IEPA offices in Springfield, Illinois, to review the progress made in IEPA's Underground Injection Control (UIC) Program and to assess comparability of the Illinois 1422 program to the National program. During the evaluation, several areas of the program were reviewed which included:

- Program Administration
- Class I Permitting
- Land Ban Petition Review Process
- Compliance and Enforcement
- Class IV/V Program
- Data Management

In general, the IEPA's UIC program has made progress during FY 1990, especially in the area of land ban petition reviews. The IEPA and its consultants, the Illinois State Geological and Water Surveys, throughout the land ban petition review process have significantly contributed to the review of land ban petitions. USEPA notes that continued coordination and active communication is necessary between all Agencies involved in the land ban process in order to meet the specified ban dates. In particular, the IEPA will need to work closely with the USEPA so that permit modifications that are necessary can be issued in conjunction with USEPA's formal petition approval.

The IEPA will need to evaluate the impact that the newly promulgated Toxic Characteristic (TC) rules will have on the existing Class I non-hazardous wells and all Class V wells. A potential exists for the IEPA to become involved in additional Class I permitting and land ban activities if any of the three Class I non-hazardous wells become reclassified as hazardous.

The IEPA continues to enforce effectively against UIC violations that are found and generally resolves cases of non-compliance within 90 days. USEPA continues to stress the need for IEPA to utilize the exceptions list when appropriate. In addition, USEPA feels that the administrative order authority would significantly strengthen the IEPA's enforcement program and encourages the IEPA to continue to pursue obtaining such authority.

During negotiations on the FY 1990 workplan, the Region requested that the IEPA expand the Class V efforts, but the IEPA was reluctant given the lack of additional regulatory development or increased funding. The Division

of Land Pollution Control (DLPC) did, however, agree to limited steps which would improve the coordination of the Class V program within the State. It was noted that numerous Class V activities are being pursued by various parts of IEPA in a fragmented manner due to the lack of focus on the Class V area within the DLPC. Further, the DLPC made no significant progress during the first half of FY 1990 in expanding its role as the coordination point in the Agency for Class V activities. A Class V coordinator has now been identified, however, USEPA continues to stress the importance of the coordinator serving as the focal point for coordinating, tracking, and documenting of Class V activities within the State.

During the review, USEPA-Headquarters highlighted shallow injection wells (Class V) as the leading National priority for the UIC program over the next few years. As a result, USEPA-Headquarters has established as a high priority activity the initiation by the Regions and States of various approaches to the control of potentially endangering Class V wells through the use of existing regulations to the fullest extent possible. In accordance with this priority, further Class V activity in Illinois was discussed in some detail for implementation during FY 1991. The types of activities suggested include permitting, enforcement, and inspection of Class V wells. The Region will continue to share information regarding the Regional direct implementation initiative which focuses on high-priority well types through calling facilities in for permits; the IEPA is strongly encouraged to initiate at least limited implementation of such an approach. Other suggestions for Class V initiatives include better integration of the Class V program with the State's ground water program efforts such as linking the Class V effort to priority vulnerable ground water areas in the State or within wellhead protection areas.

Additional FY 1991 priority Class V activities would include the previously mentioned impact that the TC rule will have on Class V wells. The IEPA will be expected to evaluate the impact that the TC rule will have on the Class V program since many Class V wells are expected to be reclassified as Class IV wells. Therefore, the closure and remediation of such wells will be a top enforcement priority for the Class V program.

Consistent with the national trend, it is expected that most Class I land ban petition review activities in Illinois will be completed in the near future and as a result, a decrease in the Class I related workload is expected which would free up existing resources to support an increased Class V effort. The Region will discuss the potential to shift resources to Class V consistent with environmental priorities during negotiations on the FY 1991 state specific guidance.

### INTRODUCTION

The Illinois Environmental Protection Agency (IEPA) received primacy on February 1, 1984, to administer the State's Underground Injection Control (UIC) program for Class I, III, IV, and V wells. The IEPA regulates the universe of eight active Class I wells, five of which inject hazardous waste, and approximately 1,780 shallow injection wells (Class V wells)

identified to date. There have been no Class III wells identified in the State and there are no known Class IV wells. Regulation of injection wells is the responsibility of the Division of Land Pollution Control (DLPC) of the IEPA.

On March 19-22, 1990, representatives from USEPA-Headquarters Office of Drinking Water (ODW) and USEPA-Region V conducted a joint mid-year evaluation of the IEPA's UIC program. The evaluation included a review of IEPA files and discussions with IEPA staff. The discussions focused on a description of the Illinois program for the Headquarters representatives. In addition, the FY 1990 mid-year evaluation placed emphasis on the following activities:

- Program Administration;
- Class I Permitting;
- Land Ban Petition Review Process;
- Compliance Monitoring and Enforcement Actions;
- Class IV/V Activities; and
- Data Management.

The participants in the mid-year evaluation are listed below.

#### Participants

Region V: John Taylor  
George Hudak  
Rita Bair  
Chuck Anderson  
Chad Kincheloe

USEPA-ODW: Don Olson  
Lee Whitehurst  
Mario Salazar  
Bob Smith

IEPA: Bill Child  
Tom Cavanagh  
Bill Radlinski  
Harry Chappel  
Larry Eastep  
Angela Tin  
Becky Lockart  
Ed Bakowski  
Jill Withers  
Doug Clay  
Mayu Desai  
Glenn Savage

#### PROGRAM ASSESSMENT

##### Program Administration

Regulation of injection wells is the responsibility of the Division of Land Pollution Control of the IEPA. During FY 1990, 2.5 workyears were committed to the implementation of the 1422 program in Illinois for a total budget of \$195,443. USEPA continues to support IEPA's UIC program with 75% funding.

Based on national statistics reported to Headquarters by all primacy agencies, it appears that the UIC related tasks being performed by the Illinois 1422 program are more resource intensive than similar activities being completed by other State UIC programs with similar well populations and funding levels. Most other State UIC programs have been able to develop innovative methods to satisfy the federal requirements for Class I-IV activity as well as respond to the EPA's National priority to develop the framework for a Class V program. From the program administration perspective, it is worthwhile to evaluate further the available resources and any potential to shift priorities for FY 1991. More discussion on the shifting of resources to the Class V effort can be found in the Class V discussion that follows. The basis for the shift is the need to focus resources on the highest environmental needs and priorities for ground water protection.

The IEPA has its own system for tracking UIC activities and noted that it uses the Strategic Targeted Activities for Results System (STARS) only for tracking against commitments contained in the annual program grant.

The IEPA continues to submit very timely grant applications and quarterly reports. In addition, the final Financial Status Report was submitted on January 16, 1990.

Two recommendations from the FY 1989 end-of-year report have been implemented: 1) the UIC position in compliance/enforcement was filled during the first quarter of FY 1990; and 2) Tom Cavanagh has been designated as the Class V Coordinator within IEPA to oversee and document all Class V activities that occur in the State, and to serve as the point of contact for the Region.

Regarding the FY 1990 initiative to update the primacy package, a schedule was negotiated at the FY 1989 end-of-year evaluation. To date the IEPA has submitted a list of all the rule changes that have occurred since primacy that affect the UIC program and the Region is awaiting receipt of the submittal of a draft Memorandum of Agreement which was due on April 1, 1990. The final submittal of a draft revised Program Description is due on June 1, 1990, which may be submitted as an addendum to the original Program Description.

#### Recommendations and Conclusions

1. The IEPA continues to transmit timely grant applications, quarterly reports, and Financial Status Reports.
2. The IEPA should review its available resources in light of environmental priorities for ground water protection and consider shifting resources to Class V for FY 1991.
3. The IEPA should continue to work with the Region in the FY 1990 effort to revise the States' Primacy Package.



### Class I Permitting

To date, permit determinations have been made for all Class I wells and the IEPA currently regulates the universe of eight active Class I wells. Two wells, however, continue to operate under authorization by rule. They are:

1. NGPL-Herscher: permit denial under appeal
2. Velsicol #2: no permit required at this time since it is being used in conjunction with a Superfund project.

The status of all Class I wells can be found in Attachment A. Please note that the Velsicol #3 well will not be drilled and the permit will expire in November 1990.

Activities during FY 1990 relating to Class I permits included the plugging of Velsicol #1, St. Elmo #1, a Devonian monitoring well at the Velsicol site, and Walter J. Buck #2 well (within the area of review of Cabot and USI/Quantum). Permit activities expected during the remainder of FY 1990 include land ban related permit modifications for Cabot #1, Cabot #2, and LTV; a permit determination on NGPL-Herscher and minor modifications for Allied and NGPL-St. Elmo #2.

Newly promulgated 40 CFR 146 and 148 regulations were adopted as final rules on January 25, 1990, by the Illinois Pollution Control Board. Since the IEPA does not plan to request primacy for 40 CFR 148 (land ban), the Region did not find it appropriate to review and comment on the State's adoption of 40 CFR 148 (Part 738 in State rules) at this time or in advance of such primacy being granted. However, the Region was concerned about the State's adoption of rules without primacy and suggested that a disclaimer be appended to the final rule for Part 738, which the Board did not find appropriate. In regards to these rules, the end-of-year evaluation suggested that the IEPA actively review and comment on the draft rules. The IEPA did review the draft rules, but chose not to comment.

The IEPA will need to evaluate the impact that the newly promulgated Toxic Characteristic (TC) rules will have on the three Class I non-hazardous wells and the potential that these wells would be reclassified as hazardous. Any change in status of these wells would require the IEPA to change the permits and would also subject these wells to land ban requirements.

### Recommendations/Conclusions:

1. The IEPA will need to work closely with the USEPA during the remainder of FY 1990 to see that the permit modifications are prepared in a timely manner so that the final permit modifications are in place prior to or concurrent with USEPA final petition approval.
2. Final rules were adopted by the Illinois Pollution Control Board consistent with the Federal regulations 40 CFR 146 and 148. However, the IEPA should consider taking a more significant role in reviewing and commenting on such rules that affect the UIC program.

3. The IEPA is expected to evaluate the impact that the TC rules will have on the three Class I non-hazardous wells and the potential for these wells to be reclassified as hazardous which would require issuing new permits and which would subject these wells to land ban requirements.

#### Land Ban Petition Review Process

At the present time, three Class I injection facilities in Illinois have submitted land ban petitions which are in various stages of review. (See Attachment B for the status of each petition review.)

To date, the USEPA is very pleased with the assistance IEPA and the Illinois State Water and Geological Surveys have provided in the review of the land ban petitions. In addition, IEPA has been very timely in meeting the sometimes very short deadlines for review which have been necessary in order to reach decisions by the ban dates.

Close coordination between all Agencies involved in the land ban petition review process should continue in order for the ban dates to be met. In particular, the Region will work closely with the IEPA to guarantee that the necessary mechanical integrity demonstrations are made and that permit modifications are issued in a timely manner.

As discussed above, should any of the three Class I non-hazardous wells become reclassified as hazardous, additional land ban work could develop for IEPA in support of petitions submitted the Region.

#### Recommendations and Conclusions

1. The Land Ban Petition Review Process in Illinois is viewed as a success in light of the coordinated review efforts provided by the IEPA and its consultants, the Illinois State Water and Geological Surveys.
2. Close coordination and active communications between all parties should continue through the remainder of the year so that timely land ban petition decisions are made.
3. The IEPA may be asked to assist Region V with any land ban activity that develops from the reclassification of the three Class I non-hazardous wells, if they become hazardous as a result of TC rules.

#### Compliance Monitoring and Enforcement Actions

Violations at Class I well sites are routinely found by the IEPA as a result of either field inspections or review of the monthly monitoring reports. IEPA's mechanism for dealing with these violations is found in Attachment C.

During the first half of FY 1990, the IEPA sent an enforcement letter regarding a Class I violation at the Cabot #1 well. As a result, the well was successfully shut-in until the violation could be abated. In addition,

a compliance inquiry letter (CIL) was issued to a facility for a Class V violation found as a result of a citizen complaint. Subsequent to the mid-year review the IEPA informed the Region of additional enforcement activities that occurred during FY 1990 which included: a follow-up enforcement action (pre-enforcement conference letter) for the Class V violation; and a CIL for a Class I violation at the LTV Steel facility for violation of a permit condition. This information was not brought to the review team's attention during the visit and therefore was not evaluated by the Region.

The IEPA routinely resolves cases of non-compliance within 90 days and does not have any facilities on the exceptions list. The IEPA agreed to utilize the exceptions list when appropriate. Further, the IEPA continues to adequately report all Class I violations as SNC and provides to the Region a summary of all the violations as an attachment to the quarterly reports.

USEPA finds the IEPA's use of the record review forms to document the review of the monthly monitoring reports very useful and suggests that the IEPA continue to use the forms.

USEPA finds it difficult to reach any conclusions based on the file reviews regarding timeliness of enforcement actions, since the files did not present an accurate paper trail history of the enforcement actions. Copies of CIL's, letters of resolution, and other documentation was frequently missing from the files. It is noted that the loss of key personnel in the Compliance/Enforcement Unit contributed to this problem in the first half of FY 1990 and that the situation is expected to improve in the coming months. USEPA also notes that the lack of an adequate paper trail of the entire history of enforcement actions creates problems in monitoring the history of violations and their reoccurrence. The IEPA noted that they will track UIC violations on a personal computer (PC) beginning in FY 1991 which will be set up similar to the compliance tracking system used by RCRA. However, USEPA feels that some improvement is needed in filing materials related to enforcement actions.

The IEPA began a filing system to track Class V compliance and enforcement history. Currently three Class V files have been developed and the USEPA encourages the IEPA to continue this practice.

All UIC Class I hazardous facilities are inspected 4 times a year regardless of the program funding; the UIC program funds one inspection per year. USEPA-Headquarters noted the importance of reporting all activities at UIC facilities and recommended that some mechanism be developed to track all inspections and not just those funded by the UIC program.

Compliance reviews are expected to be completed for all eight facilities in the fourth quarter of FY 1990.

Another bill has been filed with the Illinois legislature in an effort for the IEPA to obtain administrative order authority. The IEPA is not very hopeful that it will be approved in the near future. However, consistent with recommendations made in the past, USEPA feels that administrative order

authority would strengthen IEPA's enforcement program and suggests that the IEPA continue to attempt to gain this authority.

#### Recommendations and Conclusions:

1. The IEPA appropriately identifies all Class I violations as SNC and continues to resolve cases of non-compliance within 90 days. USEPA continues to encourage the IEPA to utilize the exceptions list when appropriate.
2. USEPA is pleased with the enforcement action taken against a Class V violation and the development of Class V enforcement files and continues to encourage the IEPA to implement a proactive Class V enforcement program.
3. USEPA was impressed with the IEPA's use of record review form to document the review of monthly monitoring reports and suggest that this practice continue.
4. USEPA found it difficult to track the enforcement history of certain actions due to information missing from the files and suggests that IEPA work to improve the compliance filing system. In particular, it is important that IEPA monitor the history of violations and their reoccurrence.
5. Since all Class I hazardous facilities are inspected four times a year and the IEPA is only reporting one inspection, it is recommended that some mechanism be developed to track all inspections.
6. USEPA continues to strongly encourage the IEPA to pursue obtaining administrative order authority which would significantly strengthen IEPA's enforcement program.

#### Class IV/V Program

During the first half of FY 1990, the IEPA was involved in pursuing a Class V violation based on a citizen complaint, a referral to USEPA for assistance in a Class V case, and miscellaneous phone conversations and letters regarding potential Class V wells and requests for inventory information.

A citizen complaint in the spring of 1987 led to a CIL requesting that the Adams Brothers facility make a determination of whether the waste being disposed of into a well was hazardous. Upon determination that the waste was not hazardous, the IEPA issued another CIL, this time under UIC authority, for failure to provide inventory information for two Class V wells (septic system and an abandoned dry well) and for failure to provide additional information to determine whether the injection well may be endangering a underground source of drinking water (USDW). Subsequent to the mid-year review the Region learned that the IEPA took further enforcement action against the Adams Brothers facility by issuing a Pre-Enforcement

Conference Letter in order to schedule a Pre-Enforcement Conference to discuss the situation further.

On January 4, 1990, the IEPA requested a conference call with the Regional UIC staff to discuss a potential Federal override action for a Class V well. IEPA's Division of Water Pollution Control has been working with a number of industries in Streator, Illinois, which dispose of wastes down dropshafts which are classified as Class V injection wells. In most cases schedules have been worked out with the industries to eliminate the discharges and for them to connect to the city's sewer system. One industry, Anchor Glass, was not as cooperative and informed the IEPA that they would consider reducing the flow and hooking up to the city's system in 1992. The IEPA found this unacceptable and informed Anchor Glass of possible Federal override. As negotiated, the Region transmitted a letter to Anchor Glass expressing the concern about the situation and encouraged them to come to some agreement with the IEPA or else the Region would become actively involved. Shortly after this letter, the Region was informed by the IEPA that Anchor Glass was now interested in resolving the situation and was willing to consider connecting to the city system sooner than 1992. The IEPA is still waiting for a letter of commitment, but is happy with the progress being made at this time.

Two other activities the IEPA was involved with in the first half of FY 1990 include: 1) a request for inventory information from a facility placing coal combustion material into an abandoned underground coal mine; and 2) coordination on the Osmose Wood Preserve RCRA site. The Osmose Wood Preserve was notified of the need to obtain a State ground water permit from the Division of Water Pollution Control and the need to determine the classification of the well as either a Class IV or Class V well.

In an effort to gain a better understanding of the role other programs in the Agency have in the Class V area, Mario Salazar, USEPA-Headquarters Office of Drinking Water (ODW), and Chuck Anderson, USEPA-Region V, met with representatives of the Division of Water Pollution Control and the Division of Public Water Supplies to discuss relevant activities.

#### Division of Water Pollution Control (DWPC)

In past reviews, Region V learned that the DWPC was heavily involved in the closure of Class V wells in Streator, Illinois. However, during recent discussions it was learned that the DWPC's involvement in Class V expands beyond just its involvement in Streator. The DWPC is responsible for issuing State ground water permits to many facilities and operations that are Class V wells such as industrial drainage and septic systems that serve more than 20 people. These permits are relatively detailed and in some cases ground water monitoring is required. There may be as many as 200-300 of these permits which are Class V wells. The DWPC is looking into developing a list of Class V wells permitted by their office for the USEPA.

Division of Public Water Supply (DPWS)

Through discussions with the DPWS, USEPA learned that the State's wellhead protection program was not serving as an effective mechanism for identifying Class V wells within setback zones. The DPWS staff are not actively looking for Class V wells as part of the well site surveys. To date only 3 Class V wells were found. The DPWS was willing to discuss additional Class V public education/outreach with Regional assistance. It is noted that some of the DPWS field staff attended the Class V training that was conducted by the Region during August, 1989, in Maywood and Springfield, Illinois. However, the DPWS staff were not willing to take the lead in the State's Class V effort and they are not routinely coordinating Class V activities with the Division of Land Pollution Control.

Therefore, it has become clear that many Class V activities are being pursued by various parts of IEPA in a fragmented manner and that there is an apparent lack of focus for the Class V program in Illinois. During negotiations on the FY 1990 workplan, the Division of Land Pollution Control's (DLPC) role in coordinating the Class V program was better defined. However for FY 1990, the DLPC did not commit to implement a Class V program beyond coordination activities given the lack of additional regulatory development and increased funding. During FY 1990, it was noted that the DLPC has made no significant progress in expanding their role as the coordination point in the Agency for Class V activities. A Class V coordinator has now been assigned in the DLPC; accordingly, USEPA continues to stress the importance of the role that the coordinator should serve as the focal point for coordinating, tracking, and documenting Class V activities within the State, as well as, maintaining contact with the Region's Class V effort to assure that the State plays a major role in future Class V efforts and that information is disseminated back to the various State programs.

During the review, USEPA-Headquarters discussed the National UIC program direction which is increasingly moving towards greater emphasis on Class V wells. The FY 1991 Water Programs Agency Operating Guidance highlights Class V as the leading National priority for the UIC program over the next 4 years. Additional regulations, however, are at least 2-1/2 years away and are expected to be relatively general in nature. As a result, USEPA-Headquarters has established as a high priority activity for FY 1991 the initiation by the Regions and States of various approaches to the control of potentially endangering Class V wells through the use of existing regulations to the fullest extent possible.

In accordance with this National priority, the further Class V actions which IEPA could currently take were discussed in some detail. In the past, the DLPC has essentially reacted to cases which were brought to their attention through public complaints or a facility's self-inquiry. While continuation of such activity is appropriate, USEPA believes the State could also begin to address some of the Class V wells on the State's inventory which pose the greatest potential threat to USDW. The types of activities suggested include permitting, enforcement, and inspection. By comparison, in the

direct implementation States of Indiana, Michigan, and Minnesota, Region V is focusing on the highest National priority well types, such as service station and industrial disposal wells located in priority ground water areas, and is requiring a number of them to submit permit applications if they wish to continue to inject. During the mid-year visit, the Region shared some material on this approach with the IEPA and finds that in many cases the operators are voluntarily shutting-in the wells rather than attempting to provide the detailed information required by the permit application. The Region will consider and discuss with the IEPA the possibility of assisting the State in enforcement of Class V cases such as those which might be generated by such a call-in. Other suggestions for Class V initiatives include better integration of the Class V program with the State's ground water program efforts such as linking the Class V effort to vulnerable ground water areas in the State or within wellhead protection areas.

The IEPA raised the question of how the additional Class V activities suggested by USEPA could be funded, in light of the fact that no significant increase in grant funding is anticipated. USEPA representatives pointed out that consistent with the National trend toward completion of initial Class I activities, the completion of most land ban petition review activities in Illinois in the near future should cause a decrease in the Class I related workload for FY 1991. This in turn, should free up existing resources from the current resource base in order to support an increased Class V effort. With Class I wells largely controlled, environmental needs are greater in the Class V area.

The FY 1991 Agency Operating Guidance also identifies the need for Regions and States to target enforcement of all Class IV wells and those Class V injection wells which may pose a substantial threat to USDWs. The IEPA will be expected to evaluate the impact that the newly promulgated TC rules will have on all Class V wells, since it is expected that many of these wells will be reclassified as Class IV wells. As discussed in the Permitting and Land Ban sections of this report, the IEPA will also need to assess whether any of the three currently non-hazardous Class I wells in Illinois will become hazardous as a result of the TC rules, and if so, take appropriate action. Therefore, the closure and remediation of the Class IV wells will be a top enforcement priority within the context of a Class V program. To date, the IEPA has no plans for dealing with the newly promulgated TC rules or the impact it will have on the Class I non-hazardous or Class V wells, since the rule does not come into effect for six months. It is expected, however, that a workgroup will be formed to address the implementation of the TC rules, in which Class V will be a topic for discussion.

#### Recommendations and Conclusions:

1. The IEPA pursued a number of Class V related activities in the first half of FY 1990, including an enforcement of a Class V violation based on a citizen complaint and a referral to the Region for assistance in a Class V case.

2. The USEPA learned that the Division of Water Pollution Control issues State ground water permits to facilities which classify as Class V wells. There may be as many as 200-300 of these permits and they are looking into providing the USEPA a list of these permits.
3. USEPA also learned that the Division of Public Water Supply is not actively looking for Class V wells within setback zones of public water supply wells and that the wellhead protection program is not serving as an effective mechanism to identify Class V wells in wellhead areas.
4. We conclude that numerous Class V activities are being pursued by IEPA in a fragmented manner or are being ignored due to a lack of focus in the Class V area. The FY 1990 workplan identifies an increased role by the DLPC to coordinate Class V activities in the State. We note that a Class V coordinator has been identified, however, no significant progress was made in the area of coordination. Therefore, the need remains for the DLPC to serve as the focal point for coordination, tracking, and documenting of Class V activities within the State and to maintain contact with the Region on the national Class V effort.
5. The USEPA continues to stress the importance for all States, including Illinois to begin implementing a Class V program. Guidance from USEPA-Headquarters stresses the need for the States to initiate permitting, inspection, and enforcement using existing authorities. Region V will continue to share information regarding the Regional direct implementation initiative which focuses on high-priority well types through calling facilities in for permits; IEPA is strongly encouraged to initiate at least limited implementation of such an approach. Other suggestions for Class V initiatives include better integration of the Class V program with the State's ground water program efforts such as linking the Class V effort to vulnerable ground water areas in the State or within wellhead protection areas.
6. The IEPA will be expected to evaluate the impact that the TC rules will have on the Class V program since many Class V wells are expected to be reclassified as Class IV wells. Therefore, closure and remediation of such wells will be a top enforcement priority for the Class V program.
7. It is anticipated that most Class I land ban petition review activities will be completed in the near future and as a result, a decrease in the Class I related workload is expected which would free up existing resources to support an increased Class V effort. Therefore, USEPA continues to emphasize the need for the DLPC to commit to develop a more pro-active Class V program based on environmental priorities, consistent with FY 1991 National and Regional guidance.

#### Data Management

Compliance of Class I facilities is hand-tracked on forms, rather than on a computer system. The monthly monitoring reports, however, are tracked on an R-base system that the Illinois State Geological Survey inputs on a monthly basis. The Class V inventory is tracked on a PC. The IEPA plans to



transfer the Class V inventory from dBase to Lotus to make it more accessible for the staff.

USEPA found it difficult to review files with the present system for filing UIC information. In particular, we found it difficult to track the history of Class I permitting and compliance. Therefore, we note the need for the files to be arranged in a manner which allows IEPA staff easy access to historical information regarding UIC facilities.

**Recommendations and Conclusions:**

1. The IEPA's data management system is adequate, however, the Region continues to encourage the IEPA to make improvements as necessary.
2. USEPA suggests that the IEPA evaluate its system for filing UIC data to ensure that historical information is readily accessible in the files for all UIC facilities.

## Attachment A

## ILLINOIS CLASS I STATUS (10/89)

Active Permitted Class I Wells

<u>Well</u>	<u>Permitting Status</u>	<u>State Reviewer</u>
1. Allied Chemical UIC-003-W1-AC	Permitted 3/30/87 (Appeal) Modification 9/9/88 Appeal Dropped Minor Mod 4/11/89	Doug Clay
2. Cabot #1 UIC-008-W1-CC	Permitted 9/30/88 (Appeal) Modification 8/30/89 Appeal Dropped	Jill Withers
3. Cabot #2 UIC-007-W2-CC	Permitted 2/8/88 (Appeal) Modification 8/30/89 Appeal Dropped	Doug Clay
4. LTV Steel/J&L UIC-004-W1-JL	Permitted 7/7/87 (Appeal) Modification 12/7/87 Appeal Dropped	Mayu Desai
5. NGPL-St.Elmo #2 UIC-001-W2-NS	Permitted 9/15/86 Modification 6/15/87 Modification 10/27/89	Jill Withers
6. USI/Quantum	Permitted 2/26/88 (Appeal) Modification 10/27/89 Appeal Dropped	Jill Withers

Active Wells Under Rule Authorization

1. Velsicol #2 UIC-004-W2-VC	Draft Permit 8/27/87 Consent Decree 9/15/89	Jill Withers
2. NGPL-Herscher	Permit Denied 9/4/87 (Appeal) (working on appeal)	Doug Clay

Permit Denials with Abandonment Plans

1. Velsicol #1 Withers	Permit Denial 11/1/85  Abandonment Plan 12/30/88 Plugged 11/13/89	Jill
2. NGPL-St.Elmo #1	Permit Denial 4/30/87 Abandonment Plan 8/4/89 Plugged 12/89	Jill Withers

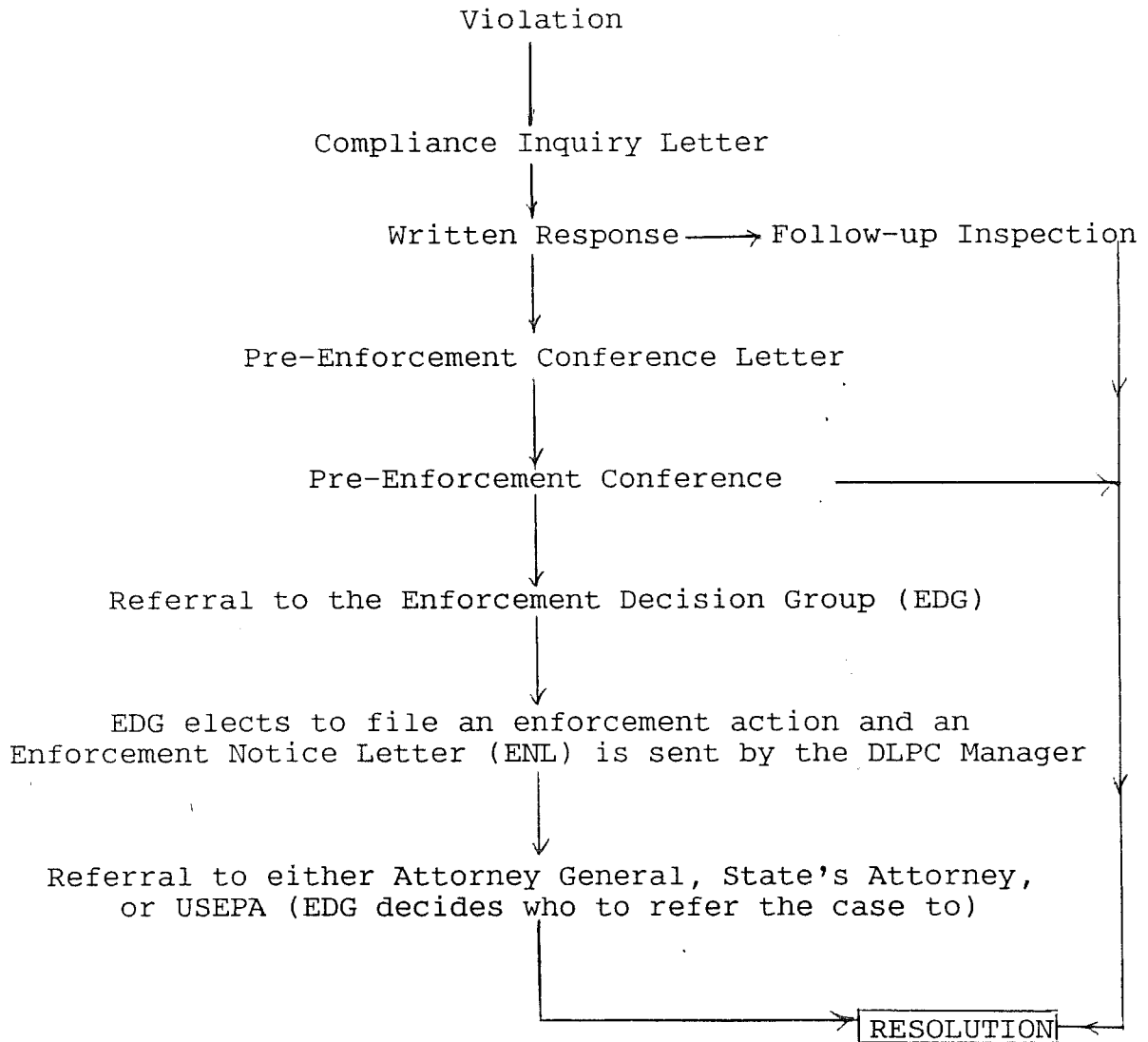
## Attachment B

## STATUS OF LAND BAN PETITION REVIEWS

Company	Effective Date of Ban	Petition Received	Prelim Review	Revised Pet. Recvd	Status
Allied	5/8/90	2/25/88	5/6/88	9/6/89	Meeting on revised petition 11/21/89; Draft Decision 2/6/90 and Public Hearing 3/12/90
Cabot	8/8/90	4/17/89	10/13/89	1/31/90	Needs permit mod based on injection zone definition.
LTV	8/8/90	9/29/88	3/17/89	7/27/89	Geological section of second revision received 1/18/90. Response to NOD received; final review underway. Needs permit mod based on injection zone definition.

Attachment C

IEPA's Compliance/Enforcement Procedures



Note: IEPA is not limited to the order as presented above and can jump any steps that are necessary to resolve a situation of non-compliance in a timely manner.

## TRIP REPORT

TO: Illinois Environmental Protection Agency (IEPA), Springfield, Illinois

DATE: March 19-22, 1990

PURPOSE: Conduct Joint FY 1990 IEPA Mid-Year Review with Headquarters

### PARTICIPANTS:

Region V: John Taylor, George Hudak, Rita Bair, Chuck Anderson, and Chad Kincheloe

Headquarters-ODW: Don Olson, Lee Whitehurst, Mario Salazar, and Bob Smith

IEPA: Bill Child, Tom Cavanagh, Bill Radlinski, Harry Chappel, Larry Eastep, Angela Tin, Becky Lockart, Ed Bakowski, Jill Withers, Doug Clay, Mayu Desai, and Glenn Savage

PREPARED BY: Rita Bair *RB*

### ACCOMPLISHMENTS

On March 19-22, 1990, representatives from USEPA-Headquarters Office of Drinking Water (ODW) and USEPA-Region V conducted a joint mid-year evaluation of the IEPA's Underground Injection Control (UIC) Program. The mid-year evaluation was conducted through the review of information in the IEPA's files and through discussions/staff interviews with IEPA staff. The discussions focused on a description of the Illinois program for the Headquarters representatives and a review of progress made during FY 1990. A summary of our conclusions follows.

#### Program Administration

- IEPA continues to submit timely grant applications, quarterly reports, and Financial Status Reports.
- Two recommendations from the FY 1989 end-of-year report have been implemented: 1) the UIC position in compliance/ enforcement was filled during the first quarter of FY 1990; and 2) Tom Cavanagh has been designated as the Class V Coordinator within the IEPA to oversee and document all Class V activities that occur in the State, and to serve as the point of contact for the Region.

#### Class I Permitting

- The IEPA regulates the universe of eight active Class I wells; two of which continue to operate under authorization by rule (NGPL-Herscher and Velsicol #2)

- Activities during FY 1990 related to Class I permits include the plugging of Velsicol #1, NGPL-St. Elmo #1, Devonian monitoring well (Velsicol), and Walter J. Buck #2 (within the area of review of Cabot and USI/Quantum).
- Permit activities expected during the remainder of FY 1990 include the land ban permit modifications for Cabot #1, Cabot #2, and LITV, a permit determination for NGPL-Herscher, and minor modifications for Allied and NGPL-St. Elmo #2.
- Final rules were adopted on January 25, 1990 for the Federal regulations 40 CFR 146 and 148.

#### Land Ban Petition Review Process

- Three Class I facilities in Illinois are in various stages of review and approval of the land ban petitions.
- The Region remains very pleased with the assistance provided by the IEPA and the Illinois State Water and Geological Surveys in the review of the land ban petitions.
- Continued coordination and active communication between all parties is necessary to guarantee the timely issuances of land ban petition decisions.

#### Compliance Monitoring and Enforcement Actions

- During the first half of FY 1990, the IEPA enforcement activities included an enforcement letter regarding a Class I violation at the Cabot #1 well and a compliance inquiry letter regarding a Class V violation found as a result of a citizen complaint.
- The IEPA routinely resolves cases of non-compliance within 90 days and does not have any facilities on the exceptions list.
- The Region was very pleased with the IEPA's use of the record review form to document the review of the monthly monitoring reports.
- The Region found it difficult to make any conclusions regarding timeliness of enforcement actions as a result of file reviews, since the files did not present an accurate paper trail history of the enforcement actions. We note the loss of key Compliance/Enforcement staff as contributing to this problem in the first half of FY 1990 and note that the situation is expected to improve in the coming months.
- All UIC Class I hazardous facilities are inspected four times a year regardless of program funding; UIC funds one inspection per year. Headquarters noted the importance of reporting all activities at UIC facilities and recommended that some mechanism be developed to track these inspections as well as funded UIC inspections.

### Class V Program

- Activities during FY 1990 regarding Class V included pursuing a Class V violation based on a citizen complaint, referral to USEPA for assistance in a Class V case, and miscellaneous phone conversations and letters regarding potential Class V wells and requests for inventory information.
- In an effort to better understand the role of other programs in the Agency that deal with Class V wells, Mario Salazar of ODW and Chuck Anderson of Region V met with representatives of the Division of Water Pollution Control (DWPC) and the Division of Public Water Supplies (DPWS) to discuss relevant activities.
- In past reviews, we learned that the DWPC was heavily involved in the closure of Class V wells in the Streator, Illinois area. However, during recent discussions it was learned that the DWPC's involvement in Class V wells expands beyond Streator. The DWPC is responsible for issuing State ground water permits to facilities and operations that classify as Class V wells such as industrial drainage wells and septic systems that serve more than 20 people. These permits are fairly detailed and in some cases even require ground water monitoring. It was approximated that there may be as many as 200-300 permits which classify as Class V wells. The DWPC is looking into developing a list of Class V wells permitted by their office for the USEPA.
- Through discussions with the DPWS, we learned that the State's wellhead protection program was not serving as the mechanism to identify Class V wells within setback zones. The DPWS staff are not actively looking or identifying Class V wells as part of the well site surveys. To date only 3 Class V wells were found. The DPWS was willing to discuss Class V public education/outreach with the Region's assistance. However, they were not willing to take the lead in the State's Class V effort and do not routinely coordinate Class V activities with the DLPC.
- Therefore, it became very clear that Class V activities are going unaccounted for and there is an obvious lack of leadership in the Class V program in Illinois. It is critical that a central point is designated at the IEPA to serve as a clearinghouse for keeping track and managing the State's Class V training and activities. During negotiations on the FY 1990 workplan, the DLPC's role in coordination the Class V program was better defined. However, they continued to be reluctant to implement a Class V program beyond coordinating given the lack of regulatory development. During FY 1990, we note that the DLPC made no significant progress toward serving as the coordination point in the Agency for Class V activities.
- Headquarters presented the National direction as a transitional move towards Class V. The FY 1991 Water Programs Agency Operating Guidance highlights Class V as a leading National priority for the UIC program over the next 4 years. Regulations, however, are at least 2-1/2 years away and the States should therefore begin to try different approaches to utilizing existing regulations to the fullest extent possible.

- The Class V program in Illinois should become a greater priority as it is anticipated that most Class I land ban petition review activities and Class I permitting activities will be completed in the near future. As a result, we would anticipate a decrease in the Class I related workload for FY 1991, which would free up additional resources from the current resource base in order to support an increased Class V effort.
- Headquarters and the Region therefore suggest that the DLPC begin to develop a more proactive Class V program. Guidance from Headquarters suggests that the States initiate permitting, inspections, and enforcement using existing authorities. The Region for instance is currently focusing on high-priority well types by calling them in for permits and we are finding that in many cases the operators are voluntarily shutting-in wells.
- The IEPA has no plans for dealing with TCLP or the impacts it will have on Class V wells, since it does not come into effect for six months. It is expected, however, that a committee will be formed to address TCLP in which Class V will become a topic to discuss.
- The IEPA remains reluctant to implement a Class V program, however, they were willing to consider shifting limited additional resources, as available, to Class V during FY 1991.

#### Data Management

- With the small universe of Class I wells, the IEPA does a good job of tracking Class I activities. In regards to the Class V inventory which is kept on a dBase system, the IEPA plans to convert the system to Lotus to make it more accessible for the staff.
- Both the Regional and Headquarters staff had difficulties finding information in the files particularly in the areas of Class I permitting and enforcement actions. Therefore, we note the need for an accurate paper trail of the decision-making process to be available in the files.

#### CONCLUSIONS

Generally, we are pleased with the progress made during FY 1990, particularly in the area of land ban reviews. Limited progress, however, continues to be made in the implementation of a Class V program. The Region found that there is an obvious lack of leadership in the Class V program in Illinois. The mid-year evaluation report is being prepared jointly with Headquarters and it will elaborate more on the Class V issue and suggestions for dealing with the problems.



13 FEB 1991

Mr. Bernard P. Killian  
Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Dear Mr. Killian

On November 19-20, 1990, the end-of-year evaluation of the Illinois Environmental Protection Agency's (IEPA) Underground Injection Control (UIC) program was conducted by USEPA Region V. The purpose of the evaluation was to conduct the routine end-of-year review of progress made in the regulation of Class I, III, IV and V wells during the Fiscal Year (FY) 1990.

The Region is pleased with the progress made in Class I permitting and with the high level of cooperation received from IEPA. Permit determinations have been made for all Class I wells in Illinois. It is uncertain whether the three non-hazardous wells have already conducted a Toxicity Characteristic (TC) analysis on their wastestreams. IEPA is contacting the operators to verify this. Those wells not already tested will have to run a TC analysis, and should any wells be reclassified as hazardous under the analysis, possibly re-permitted.

The Region is also pleased with IEPA's effort in the land ban petition review process, and also with the assistance from the Illinois State Water and Geological Surveys. To date, three land ban petitions were approved by USEPA, and the Region is especially pleased that IEPA incorporated the petition conditions into the permits. With the final approval of the petitions, close coordination will need to be maintained to ensure that the various petition conditions are adhered to. In particular, the monitoring well to be constructed at LTV, and subsequent monitoring effort, will need to be closely coordinated.

IEPA's compliance and enforcement programs, however, are of concern to the Region. No one has been designated as lead on reviewing compliance monitoring reports and the Region is concerned that these reports may not be properly reviewed within an adequate timeframe. The individual formerly responsible for compliance monitoring has moved to another section and IEPA staff stated that it was unlikely that this position would be refilled. It is essential that a system be initiated to ensure that compliance reports are properly reviewed within an adequate timeframe.

The Region is also concerned with IEPA's ability to deal with continued and repeated non-compliance. Region V reviewers found that Cabot was issued a Compliance Inquiry Letter (CIL) in September, the violation was resolved and in October another CIL was issued for the same violation. Monitoring reports also showed that a significant leak occurred on Cabot Well #1 from October through January, and that a CIL was not issued until January 31, 1990.

The Region is concerned about IEPA's inability to shut-in the well in a timely manner and suggests that designating a lead on compliance monitoring reviews could lead to more timely enforcement actions. Consistent with previous recommendations, Region V also continues to feel that IEPA could significantly strengthen their enforcement program if they could gain Administrative Order (AO) authority. The Region believes that with AO authority, IEPA would be better able to address permit violations, such as the case with Cabot described above.

IEPA's shallow injection well program, while consistent with the FY 1990 program plan, has shown minimal expansion over previous years. The Division of Land Pollution Control (DLPC) involvement in the Class V program has, for the most part, been reactive, in that DLPC generally responds only to citizens' complaints or referrals from other Divisions. The only major initiative shown by IEPA in FY 1990 was the development of the TC memo which was sent to all Class V operators, and that was only an informational piece which required no action on the part of the operators, nor did it require any further action on the part of IEPA.

Although it appears that a number of activities related to Class V wells are taking place at IEPA, the majority of these are taking place outside of the DLPC. This lack of focus within the DLPC has led to a fragmented approach to the shallow injection well program and, as stated in the mid-year evaluation, no significant progress is being made to expand the DLPC's role in coordinating Class V activities. The Region again reiterated that the State's wellhead protection program did not appear to adequately identify Class V wells within setback zones. The Division of Public Water Supply (DPWS) discovered only one Class V well in FY 1990 which was referred to the DLPC.

The Region is, however, pleased that the revised FY 1991 workplan provides for an increase of 1 workyear over FY 1990, for a total of 1.2 workyears in the Class V program. However, the Region is concerned that some of the proposed activities fall outside of the scope of the UIC program. The Region will continue to work with IEPA to initiate activities applicable to the UIC Class V effort. A more detailed discussion of the proposed Class V activities is being sent under separate cover.

A copy of the End-of-Year evaluation report is enclosed. In summary, the Region is encouraged by the progress made in dealing with Class I wells, particularly in regard to land ban petitions, and we look forward to working

with IEPA on developing a stronger shallow injection well program. If you have any questions or comments regarding this evaluation, please contact Laura Flynn, of my staff, at (312) 886-2929.

Sincerely yours,

/s/ RALPH R. BAUER

Valdas V. Adamkus  
Regional Administrator

Enclosure

cc: Tom Cavanagh, IEPA  
William Child, IEPA

bcc: John Taylor  
George Hudak  
Dave Werbach  
Chad Kincheloe  
Jerri-Anne Garl, GWPB

13 FEB 1991  
PM

YA 2/5/91 MW 2/13/91

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*On 2/11*

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
UNDERGROUND INJECTION CONTROL (UIC) PROGRAM  
FISCAL YEAR (FY) 1990  
END-OF-YEAR EVALUATION

INTRODUCTION

The Illinois Environmental Protection Agency (IEPA) received primacy on February 1, 1984, to administer the State's Underground Injection Control (UIC) program for Class I, III, IV, and V wells. The IEPA regulates the universe of eight active Class I wells, five of which inject hazardous waste, and approximately 1,780 shallow injection wells (Class V wells) identified to date. There have been no Class III wells identified in the State and there are no known Class IV wells. Regulation of injection wells is the responsibility of the Division of Land Pollution Control (DLPC) of the IEPA.

On November 19-20, 1990, representatives from USEPA-Region V conducted the FY 1990 end-of-year evaluation of IEPA's UIC program. The evaluation included a review of IEPA files and discussions with IEPA staff. In-depth discussions were held concerning the implementation of a shallow injection well (Class V) program. In addition, the FY 1990 end-of-year evaluation placed emphasis on the following activities:

- Program Administration
- Class I Permitting
- Land Ban Petition Review Process
- Compliance Monitoring and Enforcement Actions
- Data Management

The participants in the FY 1990 end-of-year evaluation are listed below.

Participants

Region V: Richard Zdanowicz  
John Taylor  
Laura Flynn  
George Hudak  
Dave Werbach  
Chad Kincheloe

IEPA: Bill Child  
Tom Cavanagh  
Jill Withers  
Glenn Savage  
Larry Eastep  
Ron Steward  
Becky Lockert

## PROGRAM ASSESSMENT

### Program Administration

Regulation of injection wells is the responsibility of the Division of Land Pollution Control of the IEPA. During Fiscal Year (FY) 1990, 2.5 workyears were committed to the implementation of the 1422 program in Illinois for a total budget of \$195,443. USEPA continues to support IEPA's UIC program with 75% funding.

In order to be consistent with National priorities, it was necessary for IEPA to review its available resources in light of environmental priorities for ground water protection, and consider shifting resources to Class V for FY 1991. It is expected that most Class I land ban petition review activities in Illinois will be completed in the near future, and as a result, a decrease in Class I related work is expected which would free up existing resources to support an increased Class V effort.

Although additional Class V regulations are at least 2-1/2 years away, the National UIC program direction calls for the initiation by the Regions and States of various approaches to Class V well management through the use of existing regulations. Region V has provided information on many of these approaches, which are not resource intensive, to IEPA, and we would be more than willing to provide assistance in helping implement these or similar ones should IEPA agree to do so. IEPA has now agreed in concept to shift resources from Class I to Class V activities, and has submitted a proposal, which is currently under review, which will add 1 workyear to this effort for FY 1991. A more detailed discussion of the Class V effort is outlined below.

IEPA continues to submit timely quarterly reports. The FY 1991 grant application, however, was submitted on the last possible day and was not in an acceptable form. IEPA agreed to submit a revised grant application with an increased level of effort in the Class V effort by December 5, 1990; on December 19, 1990, a copy of the submission was received via facsimile machine.

### Recommendations and Conclusions

1. IEPA should increase Class V activities in light of shifting national priorities. It is expected that the Class I workload will be decreasing in FY 1991 which would free up existing resources for an increased shallow injection well program. A revised application has now been received reflecting such a shift in resources.
2. IEPA continues to submit timely quarterly reports. An effort should be made to submit grant applications in sufficient time before the final application deadline.

### Class I Permitting

The Region is pleased with the progress made in Class I permitting and with the high level of cooperation received from IEPA. To date, permit determinations have been made for all Class I wells in Illinois. IEPA regulates a universe of eight active Class I wells. However, two of these wells are currently under authorization by rule. They are:

1. NGPL-Herscher: permit denial under appeal.
2. Velsicol #2: no permit required at this time since it is being used in conjunction with a Superfund project.

Activities during FY 1990 relating to Class I permits included the plugging of Velsicol #1, St. Elmo #1, a Devonian monitoring well at the Velsicol site, and Walter J. Buck #2 well (within the area of review of Cabot and USI/Quantum).

The Velsicol Chemical Corporation Injection Well #2 is now being used as part of a Superfund clean-up. As such, the well does not need a UTC permit, however, it must meet all Applicable or Relevant and Appropriate Requirements (ARARs). The USEPA will need to coordinate with IEPA in order to ensure that the appropriate requirements have been met. Velsicol's injected waste, K039, will be subject to the land disposal restrictions on May 8, 1992.

The new Toxicity Characteristic (TC) Rule was finalized on June 29, 1990. The IEPA will need to evaluate the impact that the newly promulgated TC Rule will have on the three Class I non-hazardous wells and the potential that these wells would be reclassified as hazardous. It is uncertain at this time whether TC analysis has been done at the three non-hazardous sites in Illinois. If not already done, a TC analysis of the injectate of all Class I non-hazardous wells will need to be obtained as soon as possible. Any change in status of these wells would require the IEPA to change permits and would also subject these wells to land ban requirements once the ban dates for TC wastes are set. We do not expect these dates to occur for several years.

Although the TC Rule is not covered by a current RCRA delegation of authority to the State, we suggest that IEPA assist by requesting a TC analysis of the three Class I non-hazardous wells in Illinois, namely NGPL - Herscher, NGPL - St. Elmo, and USI/Quantum. Copies of the results should be made available to Region V as soon as possible so that USEPA can work in conjunction with the IEPA to make a final determination on the status of these wells.

### Recommendations and Conclusions

1. Region V is pleased with the progress IEPA has made in Class I permitting, and with the cooperation received from IEPA's contractors, the Illinois State Water and Geological Surveys. Permit determinations have been made on all eight Class I wells in Illinois.
2. Close coordination will need to be maintained concerning the Velsicol Well #2 to ensure that all ARARs are met. Although the well is

currently being operated under rule authorization as part of a Superfund clean-up, all appropriate UIC regulations must be met.

3. We suggest that IEPA assist USEPA by requesting a TC analysis of the three Class I non-hazardous wells in Illinois, if they have not already been tested. The USEPA can work in conjunction with the IEPA to make a final determination on the status of these wells. Should any land ban activity develop from the reclassification, IEPA may be asked to assist Region V; adjustments in the program plan or grant funding would be negotiated at that time.

#### **Land Ban Petition Review Process**

The Region is pleased with IEPA's effort in the land ban petition review process, and also with the assistance from the Illinois State Water and Geological Surveys. To date, three land ban petitions were approved by USEPA, including: LTV, Allied and Cabot. The Region is especially pleased that IEPA incorporated the petition conditions into the permits. In addition, IEPA was very timely in meeting the sometimes very short deadlines for review which have been necessary in order to reach decisions by ban dates.

With the final approval of the three petitions, close coordination will need to be maintained to ensure that the various petition conditions, incorporated into the permits, are adhered to. In particular, the monitoring well to be constructed at LTV, and subsequent monitoring effort, will need to be closely coordinated.

As discussed above, should any of the three Class I non-hazardous wells become reclassified as hazardous under the newly promulgated TC Rule, additional land ban work could develop for IEPA in support of petitions submitted to the Region.

#### **Recommendations and Conclusions**

1. The Land Ban Petition Review Process in Illinois is viewed as a success in light of the coordinated review efforts provided by the IEPA and its consultants, the Illinois State Water and Geological Surveys.
2. Close coordination between all parties should be maintained to ensure that the various petition conditions incorporated into the permits are adhered to.
3. Should any land ban activity develop from the reclassification, IEPA may be asked to assist Region V.

#### **Compliance Monitoring and Enforcement Actions**

IEPA continues to report all Class I violations as Significant Noncompliance (SNC) and provides to the Region a summary of all the violations as an

amendment to the quarterly reports. USEPA finds IEPA's use of the record review forms to document the review of the monthly monitoring reports very useful and encourages IEPA to continue using the forms. As noted below, at this time no one has been designated the lead responsibility for compliance reviews, the Region believes that use of these forms will serve as an aid to IEPA for ensuring that compliance is maintained at each facility. IEPA also completed compliance reviews for all eight facilities during the fourth quarter of FY 1990.

Although the UIC program funds one inspection per year for each of the Class I wells, all UIC Class I hazardous facilities are inspected four times a year regardless of the program funding. At the FY 1990 Mid-Year evaluation, USEPA-Headquarters noted the importance of documenting all activities at UIC facilities, not just those funded by the UIC program. The Region recommends that IEPA report all activities related to the UIC program on either the EPA Form 5720 quarterly reporting forms, or as an appendix to the report.

IEPA has begun a filing system to track Class V compliance and enforcement history. To date, however, only three Class V files have been developed by the Division of Land Pollution Control (DLPC). USEPA believes this to be a beneficial activity and encourages IEPA to expand this practice to cover all Class V activities.

The Region is concerned that no one has been designated as lead on reviewing compliance monitoring reports and that these reports may not be properly reviewed within an adequate timeframe. The individual formerly responsible for compliance monitoring has moved to another section and is no longer responsible for monitoring Class I compliance.

IEPA staff stated that it is unlikely that this position will be refilled, and that the review of monitoring reports will probably revert back to the older system of initial review by field staff with later review by permit staff. The field staff will be looking for reporting violations, while permit staff will be reviewing the reports for permit violations.

The Region is also concerned with IEPA's ability to deal with continued and repeated non-compliance. The Cabot well file was examined in detail, and Region V found that on September 7, 1990, a Compliance Inquiry Letter (CIL) was issued to Cabot for a violation of Section I.B.2.a of UIC Permit UIC-007-W2-CC (failure to take an appropriate grab sample at the acid waste storage tank). On September 11, 1990, a letter from Cabot was received explaining the problem. On September 24, 1990, a letter from IEPA to Cabot stated that the violation was resolved. However, on October 17, 1990, another CIL was issued for the same violation.

Monitoring reports also showed that a significant leak occurred on Cabot Well #1 from October through January, and that a CIL was not issued until January 31, 1990. Although Well #1 is only used as a standby well for Cabot Well #2 and as such is used only a few days per month, the Region is still concerned about IEPA's inability to shut-in the well in a timely manner. Region V suggests that designating a lead on compliance monitoring reviews could lead to more timely enforcement actions.



Consistent with previous recommendations, Region V continues to feel that IEPA could significantly strengthen their enforcement program if they could gain Administrative Order (AO) authority. Region V believes that with AO authority, IEPA would be better able to address permit violations, such as the case with Cabot described above.

Although another bill is before the Illinois legislature concerning IEPA's AO authority, IEPA staff did not feel optimistic about approval. In the absence of such authority, Region V suggested that IEPA consider referrals to USEPA of repeat violators or other cases where the State is unable to take timely action. In addition to helping curb non-compliance, Federal enforcement actions might strengthen the case for State AO authority, as a preferable alternative to a continued Federal presence in Illinois. Region V officials will be available to discuss such an approach with IEPA, if the State wishes.

#### Recommendations and Conclusions

1. USEPA was impressed with IEPA's use of the record review form to document the review of monthly monitoring reports and suggests that this practice be continued. IEPA should also continue to report all Class I violations as SNC.
2. USEPA supports IEPA's practice of inspecting each Class I hazardous facility four times annually. We also encourage IEPA to document all inspections, not just those funded by the UIC program, either on the EPA Forms 5720 quarterly reporting form, or as an appendix to the report.
3. USEPA supports the development of files for Class V compliance and enforcement actions. However, files should be developed for each of the Class V facilities that have been inspected, sampled or had enforcement actions taken against them. These should include Class V sites which are being addressed by IEPA programs other than DLPC, such as the DPWS and the DWPC.
4. The Region is concerned that no one has been designated as lead on reviewing compliance monitoring reports. Reverting to the previous method of having field and permit staffs review monitoring forms may not result in an effective enforcement of monitoring and permit requirements. The Region recommends that someone be designated as lead on reviewing compliance monitoring reports as quickly as possible to ensure adequate compliance enforcement.
5. USEPA continues to support IEPA's efforts to obtain Administrative Order (AO) authority. Region V believes that AO authority would significantly strengthen IEPA's enforcement program. Region V has also offered assistance to IEPA with difficult enforcement cases in the absence of AO authority.

### Class V Program

The FY 1990 program plan provided for only a minimal (0.2 workyears) Class V effort and, in general, activities consistent with this commitment were performed and are described below. The original FY 1991 grant application contained the same minimal effort of only 0.20 workyears, however, IEPA agreed to submit a revised FY 1991 grant application with an increased level of activity for the Class V effort. On December 19, IEPA submitted a revised grant application increasing the Class V workyears from 0.20 to 1.20 workyears. The Region is pleased with the increased commitment in workyears dedicated to Class V activities, however, the Region is concerned that some of the proposed activities fall outside of the scope of the UIC program. Projects concerning residential septic systems and RCRA violations, while having beneficial environmental impacts, do not fall within the regulatory authority of the UIC program. The Region will continue to work with IEPA to initiate activities applicable to the UIC Class V effort. Interest was shown by IEPA in conducting a pollution prevention project and the Region views this as a positive step in implementing the Class V program. Comments on this proposal are being provided to IEPA under separate cover.

During FY 1990, IEPA continued to pursue a Class V violation, Adams Brothers Radiator, which was discovered as a result of a citizen complaint in 1987. A Pre-Enforcement Conference was held with Adams Brothers in April 1990. Adams Brothers returned to compliance by closing and backfilling one well, diverting waste from the septic well and submitting Class V well inventory forms for both wells. A Pre-Enforcement conference was also held with Traco in January 1990. Traco is on a compliance schedule to determine if its inside storage sump contains hazardous waste. This case has been referred to the Attorney General and is ongoing. The Region supports IEPA's enforcement activities in these situations. Both of these cases illustrate that Class V enforcement by the Division of Land Pollution Control (DLPC) can be effective in bringing Class V operators into compliance. We encourage IEPA to pursue more cases of Class V non-compliance in this manner.

A field inspector from the Rockford Region Office identified two facilities which were found to have Class V wells. Another inspector, while reviewing plans for a RCRA groundwater remediation plan for Pierce Chemical Company, discovered two infiltration pits previously not identified as Class V wells. He also found and identified a Class V well at Sundstrand Aviation while doing a routine site inspection. A standard IEPA Class V letter was sent to the above facilities requesting the owner to submit injection well inventory data to IEPA. In addition to requiring inventory submission, this point of identification would be an excellent time for IEPA to advise well owners of potential contamination and liability problems and suggest voluntary well closure. This additional step need not require significant resources and has proven very successful in the programs of Region V and other States. This coordination with other Divisions is viewed by the Region as strengthening IEPA's shallow injection well program. These situations also demonstrate the need for a strong Class V coordination effort among the various Divisions at IEPA. We hope to see more wells identified and dealt with in the future as a result of inter-divisional coordination.

IEPA also developed a Toxicity Characteristic (TC) Rule Memo which was sent to all well owners listed in the Illinois Class V inventory. However, no attempt has been made to follow up on this letter, nor was any response solicited from the operators. This letter simply stated the regulations concerning TC and informed the operators that they may become hazardous. Region V suggests that an attempt be made by IEPA to determine how each operator will address the TC issue.

To date, IEPA has no plans for dealing with the newly promulgated TC Rule or the impact it will have on Class V wells. The closure of those Class V wells which will be reclassified as Class IV under TC will need to become a top enforcement priority within IEPA's UIC program. The Region suggests that IEPA assist USEPA and request a TC analysis of all well types suspected of being hazardous under the new TC Rule.

As a result of negotiations for the FY 1990 workplan, the DLPC appointed a coordinator for Class V activities at IEPA. However, during FY 1990, the DLPC does not appear to have made any significant progress in expanding their role as the coordination point at IEPA for Class V activities. USEPA continues to stress the importance of the role that the coordinator should serve as the focal point for coordinating, tracking and documenting Class V activities within the State in addition to working with other Divisions to explore ways that their programs can complement the shallow injection well effort. The coordinator should also maintain contact with the Region's Class V effort to assure that the State plays a major role in future Class V efforts and that National and Regional information is disseminated back to the various State programs.

As noted above, while a number of activities related to Class V wells are taking place at IEPA, the majority are being conducted by programs other than the DLPC. The Division of Water Pollution Control (DWPC) was involved with the closure of a number of Class V wells in Streator, Illinois, and is also responsible for issuing State ground water permits to many facilities which are classified as Class V wells. There may be as many as 200-300 of these Class V wells permitted. At the Mid-Year review, DWPC was asked to develop a list of these Class V wells for USEPA, however, to date, this has not occurred. The Division of Public Water Supply (DPWS) coordinates the State's wellhead protection program which has been delegated the task of identifying Class V wells within setback zones. However, during FY 1990 DPWS discovered only one Class V well which was referred to the DLPC.

Consistent with previous evaluations, Region V reiterates that it is unlikely that the State's well site survey program is adequately identifying Class V wells within setback zones since many more shallow injection wells would normally have been expected to have been found, especially from such a large universe of wellhead areas. The suggestion was made by Region V that IEPA use unexpended funds from FY 1990 to evaluate the effectiveness of the wellhead protection program in terms of Class V well identification and make appropriate modifications. Suggestions discussed at the FY 1990 End-of-Year Closeout for possible activities include evaluating whether the area of review for setback zones is sufficient, evaluating the effectiveness of the training

program for DPWS staff in reference to Class V wells, as well as determining whether or not DPWS inspectors are actively searching for Class V wells.

As noted in the FY 1990 Mid-Year evaluation, some of the DPWS field staff attended the Class V training that was conducted by the Region during August, 1989, in Maywood and Springfield, Illinois. However, the DPWS staff have not substantially increased their role in the State's Class V effort, and routine coordination of Class V activities between the DPWS and the Division of Land Pollution Control does not appear to be occurring. As stated above, the Region continues to stress the importance of the role that the Class V coordinator should serve--acting as the focal point for coordination, tracking and documentation of Class V activities within the State.

USEPA-Headquarters also discussed at the FY 1990 Mid-Year review the National UIC program direction which is increasingly moving towards greater emphasis on Class V wells. The FY 1991 Water Program Agency Operating Guidance highlights Class V as the leading National priority for the UIC program over the next 4 years. Additional regulations, however, are at least 2-1/2 years away, and as a result, USEPA has established as a high priority activity for FY 1991 the initiation by the Regions and States of various approaches to the control of potentially endangering Class V wells through the use of existing regulations to the fullest extent possible.

In summary, IEPA's shallow injection well program, while consistent with the FY 1990 program plan, has shown minimal expansion over previous years. The DLPC involvement in the Class V program has, for the most part, been reactive, in that IEPA generally responds only to citizens' complaints or referrals from other Divisions. The only major new initiative shown by IEPA in FY 1990 was the development of the TC memo which was sent to Class V operators, and that was only an informational piece which required no action on the part of the operators nor did it require any further action on the part of IEPA.

In discussions with IEPA staff, Region V learned that in addition to resources, one of the reasons IEPA did not wish to actively pursue more Class V cases was a concern over liability if contamination was found and IEPA did not have the resources to adequately remediate the site. However, this has not proven to be a problem in either the Federal program or other State programs, and the Region believes that IEPA can implement a stronger program through increased activities without increasing their risk of liability. Region V has already discussed and provided IEPA with information on source identification projects, permit call-in, risk reduction and pollution prevention projects. The Region has also provided IEPA with a list of contact persons in other states who are implementing some innovative approaches to shallow injection well programs.

IEPA's lack of proactive participation in the Class V area has greatly impeded the development of a shallow injection well program in Illinois. In the past several reviews, Region V and USEPA-Headquarters have stressed the need for IEPA to develop a stronger Class V program utilizing existing regulations. In the evaluation close-out, Region V and IEPA came to an agreement in principle that some shift in emphasis from Class I to Class V activities should occur.

Since the End-of-Year evaluation, the McHenry County Defenders (Defenders) and BPI (Business and Professional People in the Public Interest) have contacted Region V about the possibility of conducting a Class V site inventory and assessment project in Cary and Crystal Lake, Illinois. The group has expressed concern about storm water drainage wells in the community, and the possible effects that urban run-off may be having on USDWs in the area. The Defenders have proposed conducting a site inventory of the two towns, along with sampling and monitoring of contaminated sites.

As the Class V program has been delegated to IEPA, Region V can not issue project grants for Class V related projects. However, Region V encouraged the Defenders to contact the DLPC about the possible implementation of this project. The Region supports the concept of this project, and encourages IEPA to discuss this further with the interested parties. Consistent with previous recommendations, site inventories have proven to be a useful tool in the implementation of a strong shallow injection well program, within the Region and throughout the Country. Region V believes that this type of project could significantly strengthen IEPA's Class V program without increasing their liability, and encourages IEPA to pursue its implementation.

#### Recommendations and Conclusions

1. Actions by IEPA resulted in enforcement cases against Adams Brothers Radiator and Traco. Adams Brothers returned to compliance and Traco is on a compliance schedule. Region V encourages IEPA to continue to pursue more cases of Class V non-compliance.
2. As a result of inspections conducted by other Divisions, or offices, within IEPA, Class V wells were found at three facilities. These wells were added to the DLPC Class V Inventory and standard IEPA Class V letters were sent to each of the operators. This effort is viewed by the Region as strengthening IEPA's Class V program and we encourage IEPA to continue working with these Divisions to improve the Class V Inventory. We also suggest that the discovery of such wells be used as an opportunity to seek voluntary closure whenever possible. The Region also feels that these cases support the need for a strong Class V coordination effort among the various Divisions.
3. IEPA will need to develop plans for dealing with the impact the TC Rule will have on Class V wells. Although a memo was sent to all operators on the Class V inventory, IEPA has no further plans for dealing with the TC Rule or its potential impacts. The closure of those Class V wells which will be reclassified as Class IV under TC will need to become a top enforcement priority within IEPA's UIC program.
4. A Class V Coordinator has been designated to coordinate activities related to Class V wells at IEPA. The Region continues to stress the importance of coordinating with the DWPC and DPWS to track and document all activities related to Class V wells and to seek ways that other programs can effectively complement the shallow injection well program.

5. The Region is pleased that a number of activities related to Class V wells are taking place at IEPA. However, the Region is concerned that most of these activities are taking place outside of the DLPC and are occurring for other reasons, with the impact on shallow injection wells only an incidental benefit. The DWPC was involved with the closure of a number of Class V wells in Streator, Illinois, and has also issued several hundred State ground water permits to facilities which are classified as Class V wells. The DLPC should obtain relevant information on these facilities and update their Class V inventory.
6. Consistent with previous reviews, the Region is very concerned about IEPA's lack of proactive participation in the Class V area. The Region believes that IEPA can implement a stronger Class V program utilizing existing regulations without significantly increasing their use of resources. The Region has provided information on work other States are conducting as well as projects being conducted by the USEPA.
7. The Region is pleased with the revised commitment of 1.20 workyears for Class V activities in FY 1991. Although some of the proposed activities fall outside of the scope of the UIC program, the Region is confident that an effective program can be developed if IEPA continues to work with Region V on improving Illinois' shallow injection well program.
8. IEPA should contact the McHenry County Defenders concerning the development of a Class V inventory and site assessment project. The Region will assist IEPA by forwarding information received from the Defenders, and providing IEPA with a list of contact persons from the organizations who have already contacted Region V.

#### Data Management

Compliance of Class I facilities is hand-tracked on forms, rather than on a computer system. The monthly monitoring reports are tracked on an R-Base data management system and the Class V inventory is tracked on a PC based system.

During the FY 1990 Mid-Year review, USEPA found the Class I compliance and permitting history hard to track due to the haphazard filing of documents. However, since the Mid-Year, the UIC filing system has shown improvement. The paper trails examined by Region V reviewers for Cabot and Velsicol appeared to be adequate and documents were more easily located within the files. The Region is, however, concerned about IEPA storing their Class I files in cardboard boxes and suggests that filing cabinets be utilized to facilitate the further organization of this paperwork and to provide for better security.

#### Recommendations and Conclusions

1. IEPA's data management system has shown improvement since the previous review. The paper trail appears to be adequate and information is more readily available than in the past. The Region, however, continues to encourage IEPA to make improvements where necessary.

2. Region V suggests that IEPA utilize filing cabinets, rather than cardboard boxes, to store UIC related data. This would ensure that information is secure and readily accessible for all UIC facilities.

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